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bcc

Subject Fw: Richardson Flat sampling

Hi Kathy-

I got into the office yesterday to find an email below from Todd Leeds, indicating that they were going to sample last friday and this monday. Given that one of the primary reasons for this sampling was to address some NRDA concerns, I was (and am) concerned about the lack of time and basically non-existent pre-notification that I had regarding this event. I would have vastly preferred to have had a reasonable chance to review and comment on the sampling plan (since, as it turns out, I do have some concerns with it), and I would also have very much preferred to have the opportunity to join RMC on the sampling to be able to a) evaluate their methods, and b) see for myself the conditions in the wetland. Since I am in Salt Lake, this is relatively easy for me to do, but not with the kind of notice I recieved on this.

I talked with Jim Fricke regarding my concerns, and got some reasonable answers from him. As it turns out, I think that most of my concerns can be accomodated post-facto if RMC covers some additional things in their report on the sampling results. I also ran into Todd Leeds on Monday night and briefly discussed this with him-- he was also able to provide me with some information that addressed some of my concerns.

Below are the questions I had regarding the plan, Jim's response, and my remaining concerns/comments if applicable:

1. The Sampling Plan text says: "If tailings are found at less than six inches it will be noted in the field notes but the tailings will not be sampled." [this is referring to quantitative samples that will be taken in addition to XRF readings]. I had a question about this, wondering why soils would not be sampled if tailings were encountered. Jim's response was that the tailings at the site are already well characterized, and everyone knows that the tailings have "lots and lots" of metals. This makes sense to me, so that question is answered.

2) I also had a question about how samples were going to be collected and how depths (i.e., depth to tailings) were going to be measured. Jim said that they basically dig a shovel hole, and then collect samples off the face with a 6" section of survey lath. This seems OK, except I'm concerned about how it will work if soils are saturated in that area-- wouldn't they tend to slump into the hole as it's dug? I also asked if they are logging conditions at each of the holes-- i.e., surface cover, color of soil, presence of mottling, etc. Apparently they are not. This would have been a good thing to include, and would not have taken too much incremental time-- at least not as much as it would take to go back out and collect this type of information. This information would have been good to understand both the structure and function of the wetland, as well as provide some insight as to the possible chemical form and mobility of the metals in the soils (i.e., toxicity). It sounds like this will not be possible, but I encourage RMC to at least have their field technicians

retrospectively record their observations about conditions in the sample areas before they forget them. In discussing the sampling with Todd on Monday evening, he said that a) the wetland had been fairly dry, so depth measurements weren't that difficult, and b) that he had made notes about mottling and other soil conditions (wetland delineation-type information). I was glad to hear that, and would like RMC to provide that information in their report on the sampling.

3) Another comment I had was that I would have preferred to see the sample grid overlap the previously sampled areas. The diagram provided with the sample plan doesn't include any sample point references for those locations, so it's difficult to compare the extent of the area that will be/is being sampled with the overall area. Jim said that the report would provide a map that overlies the sampling area with previous samples. This will help, and I guess we can deal with any remaining questions after we take a look at the report.

4) Jim also said that they were going to collect (or had collected) the samples for XRF and brought them into the lab, with the intention to dry them in the microwave prior to taking XRF readings (which is one of the things that led to my concern above about sampling the wetland). I don't know if this causes any concern for interpretation of the results, but since the analytical (both XRF and chemical) will be looking only at total metals but not chemical state, I think it's OK. I'm also OK with the plan to perform chemical analysis on 20% of the XRF samples, and the plan to further divide that into two halves for Pb/As only and full bulk sediments list. However, if there is any "stratification" of conditions in the wetland (i.e., a dry area and a more saturated area), I think the samples should also be stratified by those locations to ensure that these areas are adequately represented in the chemical analytical samples. I don't know if total organic carbon is included in the standard bulk sediment analyte list, but it would be nice if that were included, since it can play a role in toxicity.

In talking with Todd, it became apparent to me that RMC (or he, at least) is under the impression that this sampling was just done for EPA, and that they were good to go based on your go-ahead. I just want to express my concern at this point that I be kept more in the loop on these activities, since at least as far as I understand, much of the impetus for doing this sampling was to determine a) if leaving the wetland would be acceptable from an ecological risk perspective (i.e., FWS as a member of the Technical Advisory Group on this project), and b) whether there are any NRD-related issues involved with the wetland (i.e., whether metals there have or are injuring FWS trust resources), and c) whether there may be a possibility of doing any restoration in this area in conjunction with the remediation that is being planned. I urge you to please feel free to call me to let me know what is going on with this site, and to let me know of any comments/concerns you may have regarding FWS' activities.

Finally, I have a comment/question regarding the wetland that is more directly addressed to you, rather than a comment on UPCM's sampling plan. As I understand the ROD, the originally anticipated action was to "positively contour" the surface of the impoundment so that precipitation would be directed off the cap. The reason for this was to prevent infiltration of water into the tailings underlying the cap, and to prevent migration of that water either down into groundwater (which, as I understand it, is relatively deep, and not necessarily connected with the Silver Creek floodplain) or down-gradient to the impoundment dam (or dike) where the water could put hydraulic pressure against the dike. Since the concept of leaving the seasonal wetland in place on the cap is basically a turn-around from the assumptions made in the ROD, it seems that there is a

I would like to talk some of this over with you before I return comments to UPCM-- where most of my comments will be directed towards the type of information I would like to see in the report that they will produce based on the sampling results. I would also like to touch bases with you on where things are with our respective ends of the project. I will be in the rest of this week (except for Friday) and I will be in Monday-Thursday of next week. I look forward to talking with you.

[illegible]

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cc
Kerry Gee <kcggee@unitedpark.com>
Subject
Richardson Flat sampling

Kathryn and Chris,

As per Kerry Gee's request I have attached the sampling plan for the seasonally wet area on the Richardson Flat impoundment. Please let me know if you have any questions or comments. Due to a forecasted change in weather next week we would like to perform the sampling tomorrow and Monday if possible.

Thank You,
Todd Leeds
RMC
801 255 2626



(See attached file: nov sampling plan.pdf) nov sampling plan.pdf